

Department of Energy

§ 850.32

equipment is cleaned, laundered, repaired, or replaced as needed to maintain effectiveness. The responsible employer must:

(1) Ensure that beryllium-contaminated protective clothing and equipment, when removed for laundering, cleaning, maintenance, or disposal, is placed in containers that prevent the dispersion of beryllium dust and that are labeled in accordance with § 850.38 of this part; and

(2) Inform organizations that launder or clean DOE beryllium-contaminated protective clothing or equipment that exposure to beryllium is potentially harmful, and that clothing and equipment should be laundered or cleaned in a manner prescribed by the responsible employer to prevent the release of airborne beryllium.

§ 850.30 Housekeeping.

(a) Where beryllium is present in operational areas of DOE facilities, the responsible employer must conduct routine surface sampling to determine housekeeping conditions. Surfaces contaminated with beryllium dusts and waste must not exceed a removable contamination level of $3 \mu\text{g}/100 \text{ cm}^2$ during non-operational periods. This sampling would not include the interior of installed closed systems such as enclosures, glove boxes, chambers, or ventilation systems.

(b) When cleaning floors and surfaces in areas where beryllium is present at DOE facilities, the responsible employer must clean beryllium-contaminated floors and surfaces using a wet method, vacuuming or other cleaning methods, such as sticky tack cloths, that avoid the production of airborne dust. Compressed air or dry methods must not be used for such cleaning.

(c) The responsible employer must equip the portable or mobile vacuum units that are used to clean beryllium-contaminated areas with HEPA filters, and change the filters as often as needed to maintain their capture efficiency.

(d) The responsible employer must ensure that the cleaning equipment that is used to clean beryllium-contaminated surfaces is labeled, controlled, and not used for non-hazardous materials.

§ 850.31 Release criteria.

(a) The responsible employer must clean beryllium-contaminated equipment and other items to the lowest contamination level practicable, but not to exceed the levels established in paragraphs (b) and (c) of this section, and label the equipment or other items, before releasing them to the general public or a DOE facility for non-beryllium use, or to another facility for work involving beryllium.

(b) Before releasing beryllium-contaminated equipment or other items to the general public or for use in a non-beryllium area of a DOE facility, the responsible employer must ensure that:

(1) The removable contamination level of equipment or item surfaces does not exceed the higher of $0.2 \mu\text{g}/100 \text{ cm}^2$ or the concentration level of beryllium in soil at the point of release, whichever is greater;

(2) The equipment or item is labeled in accordance with § 850.38(b); and

(3) The release is conditioned on the recipient's commitment to implement controls that will prevent foreseeable beryllium exposure, considering the nature of the equipment or item and its future use and the nature of the beryllium contamination.

(c) Before releasing beryllium-contaminated equipment or other items to another facility performing work with beryllium, the responsible employer must ensure that:

(1) The removable contamination level of equipment or item surfaces does not exceed $3 \mu\text{g}/100 \text{ cm}^2$;

(2) The equipment or item is labeled in accordance with § 850.38(b); and

(3) The equipment or item is enclosed or placed in sealed, impermeable bags or containers to prevent the release of beryllium dust during handling and transportation.

§ 850.32 Waste disposal.

(a) The responsible employer must control the generation of beryllium-containing waste, and beryllium-contaminated equipment and other items that are disposed of as waste, through the application of waste minimization principles.

(b) Beryllium-containing waste, and beryllium-contaminated equipment and other items that are disposed of as

§ 850.33

10 CFR Ch. III (1–1–14 Edition)

waste, must be disposed of in sealed, impermeable bags, containers, or enclosures to prevent the release of beryllium dust during handling and transportation. The bags, containers, and enclosures that are used for disposal of beryllium waste must be labeled according to § 850.38.

§ 850.33 Beryllium emergencies.

(a) The responsible employer must comply with 29 CFR 1910.120(l) for handling beryllium emergencies related to decontamination and decommissioning operations.

(b) The responsible employer must comply with 29 CFR 1910.120(q) for handling beryllium emergencies related to all other operations.

§ 850.34 Medical surveillance.

(a) *General.* (1) The responsible employer must establish and implement a medical surveillance program for beryllium-associated workers who voluntarily participate in the program.

(2) The responsible employer must designate a Site Occupational Medical Director (SOMD) who is responsible for administering the medical surveillance program.

(3) The responsible employer must ensure that the medical evaluations and procedures required by this section are performed by, or under the supervision of, a licensed physician who is familiar with the health effects of beryllium.

(4) The responsible employer must establish, and maintain, a list of beryllium-associated workers who may be eligible for protective measures under this part. The list must be:

(i) Based on the hazard assessment, exposure records, and other information regarding the identity of beryllium-associated workers; and

(ii) Adjusted at regular intervals based on periodic evaluations of beryllium-associated workers performed under paragraph (b)(2) of this section;

(5) The responsible employer must provide the SOMD with the information needed to operate and administer the medical surveillance program, including the:

(i) List of beryllium-associated workers required by paragraph (a)(4) of this section;

(ii) Baseline inventory;

(iii) Hazard assessment and exposure monitoring data;

(iv) Identity and nature of activities or operations on the site that are covered under the CBDPP, related duties of beryllium-associated workers; and

(v) Type of personal protective equipment used.

(6) The responsible employer must provide the following information to the SOMD and the examining physician:

(i) A copy of this rule and its preamble;

(ii) A description of the worker's duties as they pertain to beryllium exposure;

(iii) Records of the worker's beryllium exposure; and

(iv) A description of the personal protective and respiratory protective equipment used by the worker in the past, present, or anticipated future use.

(b) *Medical evaluations and procedures.* The responsible employer must provide, to beryllium-associated workers who voluntarily participate in the medical surveillance program, the medical evaluations and procedures required by this section at no cost and at a time and place that is reasonable and convenient to the worker.

(1) *Baseline medical evaluation.* The responsible employer must provide a baseline medical evaluation to beryllium-associated workers. This evaluation must include:

(i) A detailed medical and work history with emphasis on past, present, and anticipated future exposure to beryllium;

(ii) A respiratory symptoms questionnaire;

(iii) A physical examination with special emphasis on the respiratory system, skin and eyes;

(iv) A chest radiograph (posterior-anterior, 14 × 17 inches) interpreted by a National Institute for Occupational Safety and Health (NIOSH) B-reader of pneumoconiosis or a board-certified radiologist (unless a baseline chest radiograph is already on file);

(v) Spirometry consisting of forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV1);

(vi) A Be-LPT; and